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PHILOSOPHY OF LOVE.

THIS, at all events, is a universal subject, and closely enough allied to the present genial season of the year, by reason of its obvious association with wedding-cakes and prospective house-warnings. It is a subject, however, not so well understood as its importance would require. History is as full of it as romance; but romance comprehends it better, though still imperfectly. History classes it with the other facts it describes, affecting the fate of kingdoms and peoples; while romance considers it, without knowing why, as a universal influence, acting on character, and thus determining action. In this, romance is truer than history, but, having less intellect, it has less power. Our judgment is carried away by the one, our imagination by the other. In the one case, love is a substantial fact, which may be operated upon by policy or force; in the other, it is a charming plaything of the thoughts, which may be the subject of waking dreams, of radiant smiles, and delicious tears, but must be carefully kept in the background of the business of life, and by no means stand in the way of marriage-settlements.

When history represents love merely as a hard, substantial fact, running into a crowd of other hard, substantial facts, and making a row among them, it exhibits a deficiency in philosophy, and owes its power only to its avoidance of falsehood, and its strong-headed criticism of such facts as it comprehends. When romance represents Lord Ernest and Miss Constance Pensive as setting out in life with their mutual passion the sole business of their existence, and every action into which they are thrown, however accidentally, as working so far towards the happy dénouement or the melancholy catastrophe, it exhibits an utter want of knowledge of the world, united with as near a guess at the truth as can be made by a mind incapable of getting beyond the concrete, or the embodied representation of an abstract idea. Such stories of love, in short, instead of the pictures of life they profess to be, are allegories, in which men and women are merely personifications of sentiments, and thrown into such positions as are best calculated for their display. As allegories, they are sometimes excellent; but this very excellence is calculated to mislead. While we are children, we look upon the *Pilgrim's Progress* as an authentic narrative; and it is well known that in the case of novel-readers, the age of childhood extends to a very respectable term of years.

Bewildered between romance and history, there are some who take refuge in a cold scepticism, and deny the existence of love at all as an important influence.

The cause of this error is their being taught to regard the sentiment only in its concrete form, and to pass over the indications of its abstract existence even in their own hearts. They refuse to believe in a love which is represented as pursuing its mistress like the Columbine of pantomime, darting after her through people's windows, glass and all, and leaping over the heads of surprised costermongers. 'Fudge!' say they: 'in real life there is no such nonsense. There, we take into consideration birth, money, station, property, as well as beauty and amiability; and our Columbine, although as fond of dancing perhaps as the other, cares less for the showy than the solid advantages of her partner, and looks shrewdly out, from her beautiful eyes, for a comfortable settlement in the world. We were never in love, although we have lived to—we will not say how many years; and we never knew anybody who was in the predicament—unless, perhaps, in early life, when one gets into it sometimes just as he gets into drink, and then, after a little while, gets out of it again deadly sober.'

There is a great deal of truth in this, but still more falsehood; and it is astonishing how general the falsehood is. We once knew a lady in the medieval period of life—nay, well on to the close of that period—who on one occasion said to us: 'Isn't it odd, that although I have lived all these years in the world, I have actually never been in love?'

Yes, very odd. This lady was one of those beautiful medieval specimens which are peculiar to our own country. Her features were untouched by Time, except as he touches pictures, only to mellow them; and her voice, although it had 'sunk a tone,' had more sweetness in its serene gravity than the sweetest voices of youth.

Yes, very odd. Her eyes had lost their flashing brightness—the sunshine had faded from the surface, and left them deep, still, and mysterious; they were not speaking eyes, that confuse and alarm you with their volubility, but written eyes, whose silent characters are full of thoughts and memories.

Yes, very odd—if true. But it was *not* true. The lady, we will undertake to say, had been in love from an early period of her teens. The sentiment existed within her as an abstraction—a dream, a hope, a longing, a despair. It is that which gave its depth to her eye, its sweetness to her voice, its womanliness to her look. It harmonised with, and exalted, the noble parts of her character; and the unconscious search in which her life was spent after the unseen and the unknown kept her sacred from the mean vulgarities of the world.

It is in this way that love is a universal influence.

It is an aspiration of our nature after something to exalt and refine it. We are told that Miss Constance Pensive inspired Lord Ernest with a passion—but that is nonsense. The passion already existed, and manifested its existence by its restless search after sympathy. If Miss Constance had not been found, or, being found, had not been attended by the coincidental phenomena which marked her out as the individual sought, it would still have lived, and looked, and yearned; the search would still have been continued, and would still have been the aim and business of the inner life. How many men well up in years—men engaged in the anxious strife of the world, with brows wrinkled with care and paled with thought—start, and smile, or sigh, as they pace through their solitary room! And why?—a phantom has crossed their path, and disappeared in the rich hangings of the window: the same that lightened on them for an instant thirty years ago, burning into their souls with the flash the conviction that they indeed saw the original of the picture. And who was she, this lady of the past, this Cynthia of a minute? A mere passing stranger, seen for a moment, and then vanishing for ever—

One of those forms that flit by us when we
Are young, and fix our eyes on every face;
And oh! the loveliness at times we see,
The momentary gliding, the soft grace,
The charm, the youth, the beauty which agree
In many a nameless being we retrace,
Whose course and home we know not, nor shall know,
Like the lost Pleiad, seen no more below!

It is in vain for such dreaming gentlemen to deny the soft impeachment. This was the cause of the start, the smile, the sigh; and this was the feeling which had humanised their nature even in the midst of crosses and disappointments in the search itself. Bitterly we may smile at our folly in having clasped the shadow for the substance; but there remains behind, notwithstanding, the conviction that the substance does exist; and even if time has placed us *hors de combat* in the actual pursuit, we do not look less fondly, less confidently, into the abyss where dwells the lost Pleiad of our hope.

Without the existence of such feelings even in bosoms but little likely to indulge them, it would be difficult to understand the interest awakened on some occasions by their revelation in romance, and the convictions we feel as we read that they are part and parcel of human nature. Look at Bothwell, the stern fierce trooper in *Old Mortality*. He has been slain by the wild fanatic Balfour, exclaiming as he falls: 'Base peasant-churl, thou hast spilt the blood of a line of kings!' On his clothes being examined, there was found a pocket-book, containing, as might be expected, tavern-bills, regimental accounts, lists of victims who would yield good spoil, and other documents of the kind. But in the book there was likewise a pocket carefully concealed, enclosing letters 'written in a beautiful female hand,' without address, subscribed only by initials, and dated twenty years before. 'With these letters was a lock of hair, wrapped in a copy of verses, written obviously with a feeling which atoned, in Morton's opinion, for the roughness of the poetry and the conceits with which it abounded, according to the taste of the period.' The episode, thus slightly indicated, we feel to be true; and we at once comprehend the contradictions of the character—the occasional gentleness, its gleams of honour and generosity, mingling with the rudeness of a wild unbridled nature; and, if we were back into our teens, we could weep over the lamentation of the ruffian for the withdrawal of that influence which might have

fallen like balm upon the 'torrid zone of his wild breast:'

What conquest o'er each erring thought
Of that fierce realm had Agnes wrought!
I had not wandered wild and wide
With such an angel for my guide:
Nor heaven nor earth could then reprove me,
If she had lived, and lived to love me!

A feeling so mysterious, so little in appearance connected with the practical business of life, yet bearing so powerfully upon it, must necessarily give rise to numerous myths and theories. One of the most curious refers to a sort of poetical metempsychosis. A man, in the presence of a certain woman, is struck by the sudden fascination under which he has fallen. Confused memories come thick upon him as he looks: the tone of her voice, the character of her smile, nay, her individual features seem familiar to him; he loses himself in the idea that he has surely seen her—known her—loved her before; and at length he thinks, half with a smile, half with a pleasing dread, that as the thing is an impossibility as regards this life, it must have occurred in some former state of existence! And he is right: it did occur in another state of existence; for such are all our new phases of thought. It is hard to say what trifle in her external appearance, or perhaps in her expression, served to connect her with the distant train of fancies and feelings; but the connection once established, however slightly, the rest was easy, and she became identified with the things and thoughts of the 'former birth.'

The Indian Buddhists, who are fond of shutting themselves up in convents and monasteries, disapproving of what they consider the unholy estate of matrimony, account, on the principle of the metempsychosis, for the numerous unlucky marriages that set the world by the ears. The man and wife, they suppose, were enemies in a former state of existence, and they have instinctively come into union in this, in order to have the satisfaction of glutting themselves with the pleasure of mutual torment! On our principle, such marriages are easily enough explained by the fact, that the search terminated in mistake—the wrong person being hit upon. Our principle will likewise account for the fact, so commonly noticed with unreflecting wonder, that it is by no means beauty that determines the choice; the lovely expression by which plain features are so frequently illumined being more naturally and firmly allied to abstract feelings than mere external bloom, or material proportion.

LIFE AT AN INDIAN COURT.

AN elegant writer says, that 'the reader of history is domesticated in all families;' but the remark applies less directly to history, properly so called, than to that gossip which may be called bastard history. The stately muse who takes cognizance of events which involve the fate of nations, and only recognises kings when they are robed and crowned, or generals when they are on the battle-field, will not condescend to go in at back-doors, or haunt the private rooms in which human nature is simply human nature, merely to gratify the curious. There are many things she will not stoop to notice, which we would like to know more about. 'Deep is the sigh of taste for lost treasures,' but deeper still are the sighs we heave for things that might have been—treasures that will never be brought to light. Thus, what books the ancients might have given us had they had publishing facilities like ours—had the *cacoëthes scribendi* affected them as it affects us moderns. Very instructive, we think, could Martial have made the *Memoirs of the Court of Domitian*, and of a very peculiar literary flavour would *The Private Life of Heliogabalus* have

been. A thousand themes such as these induce us to think it 'a thousand pities' that all the writing about private life, all the gossip, which is to history what the marshy and reedy shallows are to the clear deep broad bosom of the river, should have been left to the men of our own days. Yet such has in a great measure been the case. We know little or nothing of the outs and ins of the lives of remarkable men, good or bad, from their contemporaries. We have to make hard guesses about the family affairs and the home habits of Shakspeare; and we feel an inward satisfaction when we hear of anything which brings the great masters of thought somewhat nearer our common humanity. Ordinary history does almost nothing to make us acquainted with its giants and ogres. We think of them as abstractions; we cannot tell how they fed, drank, walked, or dressed. We cannot get near them, in fact, unless the historian inadvertently drops a hint, which is like a chink through which we look in upon them in their privacy. Thus, we know all about the power of the great Ottoman potentates, but we are without any thorough knowledge of how they exercised that power at home, until we fall upon the story of Gentil Bellini's visit to Constantinople, and read how the sultan Mahmoud taught that artist a lesson, or gave a practical criticism of his painting of John the Baptist's head, by ordering up one of his slaves and quietly cutting off his head, to shew how the muscles shrank. Incidents such as these let in a flood of light upon whole pages of history, and we go on to read about the persons to whom they relate with an entirely new feeling. At the same time, it must be confessed, that we are often disposed to suspect that the narrators of private history take liberties alike with us and with their subjects. We know so little of the actual life of men who have lived at remote periods and distances from us and our ongoings, that plain unvarnished facts become to us bemisted with romance. We feel this to be the case even in reading the narratives of travellers who have made themselves familiar with people whom we have hitherto been unacquainted with; and we have recently felt it on reading a very curious book, by an English gentleman, at one time resident in India, purporting to be an account of *The Private Life of an Eastern King*—the king of Oude. Most of us have heard of the King of Oude's Sauce, and may have supposed that the potentate in question had some relish for the pleasures of the table; but beyond that we cannot even guess anything; and the revelations which the book we refer to contains, have therefore almost the appearance of fiction. The disreputable personage to whom they refer, was not a man of much mark; but his private history is curious, as affording us information respecting the habits fostered by despotic systems, and the influence which these have upon the social relations. Most readers, we presume, are aware that Oude is a small and semi-independent kingdom in India, lying between Nepal and the Ganges.

The gentleman to whom we are indebted for these particulars respecting the character of the late king of Oude, and the manners and customs of his court and country, was one of five Europeans whom the king, with the sanction of the British resident, appointed to offices in the royal household. He went to Lucknow, the chief town of Oude, in connection with a mercantile undertaking, and hearing that a post in the king's service was then vacant, he made application for it, doubtless prompted to do so by learning that his swarthy majesty was fond of Europeans, and that some of them in his employment were in a fair way of

making fortunes. After being presented at court, and approved of by the resident, he took the customary present to his royal master, and was regularly installed in his office, which, we presume, was that of librarian. The five Europeans who held appointments about the person of Nussir-u-deen, were in reality his companions. Their duties seem to have been comparatively light; at least the most arduous of them seem to have consisted in studying his majesty's temper, humouring his whims, and drinking with him after dinner. Though a Mussulman, the late king of Oude was by no means abstinent. He held that the Koran only forbade the abuse of wine; and as he allowed his subjects the use of it, he appears to have considered himself justified in using it rather more freely himself. At his private dinners, the Europeans were generally the king's only guests. They were placed on either side of his gilded chair; and, as he dressed in the English fashion, the company, on ordinary occasions, may be said to have resembled a small party of decidedly 'fast' men, such as might be assembled in a London dining-room. Some features of those private banquets—for banquets they were, in so far as the viands were concerned—had, of course, a distinctly Oriental character. The king was attended by six moon-faced beauties, in flowing gauze d—peries and loose *pyjamas*, who took their turn in fanning him and filling his hookah; while, at one end of the room, a thin curtain concealed the ladies of the harem from the gaze of the guests, allowing the fair ones, however, to participate to some extent in the amusements which generally followed the dessert. In almost everything else, the private dinner-parties at the palace of Lucknow might be said to have been European. The cook was a Frenchman; champagne and claret were the wines usually drunk; and the dinner passed off very much as dinners do pass off in polite society among ourselves. It was after the wine had begun to affect the weak head of 'The Refuge of the World,' that the peculiarities of court-life at Lucknow began to be manifested. His majesty was particularly fond of all kinds of practical jokes; and being somewhat gross in his tastes, his after-dinner amusements were not always of the most decorous kind. The most innocent of them, perhaps, were the graceful dancing of the nautch-girls and the performances of the puppet-show. We may take it for granted, that if the directors of that celebrated opera in which Punch and his wife are the *primo uomo* and *prima donna* had proceeded to Lucknow with their singular company, they might long ere this have returned to us as nabobs; for nothing delighted his majesty more than the puppets, especially when he could cut the strings by which they were set in motion, and excite the laughter of his subservient European friends by this display of his dexterity. There was no hope of favour for any one in the king's service if he did not make it his study to minister to the royal amusement, or allow himself to be amused by the royal frolics. Consequently, when his majesty wished to play at chess, it was incumbent on his opponent to play as badly as he could; when the billiard-table was resorted to, some one always managed to deal with the balls in such a way as that the king should make the greatest number of points; in short, it was necessary that the august personage should be allowed to cheat and should be himself cheated so as to preserve his superiority and gratify his vanity. We shall have occasion to notice that the evening amusements in the palace of Lucknow were not always of a harmless nature; meanwhile, let us look for a moment at this Eastern potentate's circumstances and way of life in general.

It would seem that the cares of state have never pressed very heavily on any of the native princes with whom the East India Company has from time to time made arrangements, territorial and pecuniary, very much to its advantage. The rulers of Oude, at least,

* *The Private Life of an Eastern King*. By a Member of the Household of his late Majesty, Nussir-u-deen, King of Oude. London: Hope & Co. 1855.

have never been very patriotic; for Ghazi-u-deen, the father of the personage whose private life we are now glancing at, parted with a large tract of his country, and a considerable sum of money to boot, receiving, as an equivalent, the title of King instead of that of Nawab. His son and successor Nussir ascended the throne when but a young man; and not having been gifted by nature in any extraordinary degree, except with strong passions, he had little else to do than to gratify these, and to spend his days in amusing himself. Allowing his subjects to fight among themselves whenever they pleased, and to enter the service of the East India Company if they thought fit: letting things take their course, in short, his majesty made no attempt at governing, in anything like the proper sense of the term. A large tract of land, added to his dominions by the Company, abounded in wild animals—elephants, tigers, and hunting-leopards; and he seems to have had a desire to have specimens of that class of his subjects brought as near him as the more rational classes were, for his menagerie formed one of the most notable features of Lucknow, and combats between wild beasts were among the chief sources of amusement to him and his people. Whenever a particularly formidable tiger was taken alive, a fight between it and some savage champion of the jungle, kept in the royal menagerie, was got up. Camels were made to fight with tigers. Men were often killed by the infuriated brutes; but the king was amused; and when he could not indulge his taste for butchery on so grand a scale, he had partridges and quails brought in after dinner, and trained to fight on the dining-table. Anything that recommended itself to him by its sanguinary or brutal character, was his delight, provided it could be witnessed in safety; for, like all who are cruel, his majesty was by no means courageous. A part of each day was spent with his European friends, and leap-frog, or a 'bicker' with sunflowers in the garden, were then the favourite amusements. While the king was thus spending his time, large numbers of his people were begging in the narrow streets and bazaars of Lucknow. Those men who had any spirit enlisted in some of the Company's regiments, while many of the women enrolled themselves in the king's corps of female sepoys. The latter were what might be called the household troops. It was their duty to guard the entrances to the women's apartments in the palace. They bore the ordinary military accoutrements—musket, bayonet, and cartouch-box; were dressed in male attire; and were regularly drilled like other soldiers. Although, as we have said, these Amazons were, like the eunuchs and female slaves, only engaged about the rooms of the king's wives and favourite ladies, they were, in fact, the only troops he could command sometimes; for while he had male regiments in his pay, the real military force of the country was under the orders of the British resident. On one occasion, the female sepoys were employed in a war which his majesty waged against his mother. This old Begum seems to have been rather a remarkable person. During her husband's reign, her son Nussir was in imminent danger of being put to death by his own father, the old man having resolved that his son should not succeed him. The Begum, however, interposed, carried off the intended victim, and saved him. Still, Nussir inherited his father's jealousy, and, in his turn, desired to get rid of his own son; again the Begum interfered to protect her grandson, as she had protected his father. The female sepoys were sent to drive her out of the palace, but her attendants made a stout resistance, and, after a good deal of bloodshed, the old lady gained her point. But while Nussir spared the child, he proclaimed him to be illegitimate—to such extremes did he proceed in carrying out an object arising out of mere caprice. Though in a great degree a mere puppet in the hands

of a favourite, a slave to the lowest appetites, and altogether powerless when the British resident chose to exercise his authority, 'The Refuge of the World' frequently comforted himself as if he had been a Tamerlane or a Tipoo. When heated with wine, a jest at his expense drove him into fury. For a very poor pun, one of his chief officers, Rajah Buktawir Singh, was condemned to confinement for life in an iron cage; his property was confiscated, and his family consigned to a dungeon. But scarcely had the rajah been a year in his cage, when riots broke out in Lucknow; and one of his friends having taken the occasion to hint that the disgraced minister was the only person who could have set matters to rights, he was forthwith restored to his offices and honours.

In a country where, as in Oude, dancing-girls were elevated, by a word, to the position of chief ladies, royal favouritism was often manifested in a peculiar way. In his generous moods—for wine had sometimes a softening as well as an inflaming effect upon him—Nussir-u-deen was lavish with the revenues of his kingdom, and bestowed gifts very liberally. An English gentleman, for example, who proved himself at the royal dinner-table to be a good courtier, was pressed to enter into the service of the state; and on his refusing to do so, was sent away with a present of L.800. It is not to be wondered at that Europeans, who found it no easy matter to make money at home, should have been ambitious of serving Nussir-u-deen, even although that service involved a certain degradation. It was only necessary to get thoroughly into his majesty's favour, in order to be set upon the high-road to fortune, with every prospect of speedily attaining it. Nor was it at all difficult, we should imagine, for a man of ordinary shrewdness, and not particularly sensitive, to become a royal favourite. The most influential personage among the king's attendants was a notable instance of this. He had been a barber's apprentice, and had gone out to Calcutta as a cabin-boy. On his arrival at Lucknow, he had the good-fortune to be called upon to dress his majesty's hair, and he forthwith obtained an honour for almost every curl which his tongs had twisted. He was named the Illustrious Chief, obtained the offices of superintendent of the royal menagerie, ranger of the parks, taster at the royal table, and purveyor of the wine and beer drunk thereat. His influence was all but unbounded; he therefore amassed a fortune, by taking bribes from anxious suitors, and by charging his master rather heavily for the luxuries he supplied. The king was, as we have said, a deep drinker, but the barber's monthly bill sometimes amounted to the sum of L.9000; and when a more faithful servant ventured to hint that the king was being regularly robbed by him, it was declared to be the royal will that such robbery should continue. 'I know the bills are exorbitant,' said his majesty; 'let them be so; it is my pleasure. He'—the barber—'shall be rich.' And rich the favourite certainly became; although one of his offices, that of taster, was not quite an agreeable one. So suspicious was Nussir of being poisoned by his relatives or his subjects, that he would neither eat nor drink until the barber had tasted what had been prepared for the royal table. The wine was kept by this favoured functionary under seal, and every bottle was carefully examined before the cork was drawn. Considering the frequency with which his majesty indulged in drinking-bouts, the taster's office could not be a sinecure; nevertheless, every bottle of wine which the king drank put something into the pocket of the Illustrious Chief, and he managed to make the royal caprice profitable, by obtaining money for slaves and dancing-girls who were introduced by him. It was therefore his interest, of course, not to allow the king to reform, but to encourage those orgies in which royalty took delight, and which frequently transformed the palace

of Lucknow into something bearing a close resemblance to Pandemonium. The favourite knew that his master was not particularly fond of his relatives. In India, as in most countries where the reigning sovereign possesses absolute power to raise up and cast down those who please or displease him, the blood-royal is of very little account. Obtaining his power by means of poison, the bow-string, or the dagger, the king only recognises his nearest relatives as conspirators; and, accordingly, he either keeps them at a distance, or renders them harmless by making them poor and unpopular. Nussir-u-deen had two uncles, both old men, whom he occasionally invited to his court; and, for his own amusement and that of his guests, made drunk by drugging their wine. The barber-favourite knowing the king's *penchant* for practical jokes, and judging that he would not be at all displeased, but rather the reverse, were his aged relatives to be made the victims of a frolic, seized an opportunity which presented itself at a banquet to compel one of them to dance, and at length succeeded in so stupefying the old man, as to be enabled to divest him of his clothing, greatly to the delight of his majesty, who declared that any one who interfered to prevent the outrage would be put under arrest. On a subsequent occasion, the king's other uncle, an old man named Asoph, was invited to dinner, made helplessly drunk, and tied to his chair by strings fastened to his moustache on either side. The barber then placed fireworks under the old man's chair, which, on being ignited, scorched him so dreadfully, that he started from his seat thoroughly sobered, leaving behind him a portion of the skin of his upper lip.

This seems to have been too much for Nussir-u-deen's European officers. The individual from whose reminiscences we have taken the facts of our narrative, would not remain in the palace to be a spectator of such brutalities; and the gentleman who introduced him to court, one of the king's best friends, left the room with him. The affair led to an open rupture between Nussir and his relations. The retainers of the old uncles and all the kinsmen of the king mustered strongly: something like an insurrection took place in Oude; the royal troops were foiled in an attempt to put down the malcontents; and it was only by his majesty's promise of better behaviour that peace was restored. That promise was not kept, however; the barber retained his influence, the king got drunk and uproarious as often as ever, and the Englishmen of his court left it in disgust. At length the favourite's turn came. He had overreached himself in his endeavour to maintain complete influence over his master, and was forced to make a precipitate flight out of Oude by night. Left in a great measure with those whom he had persecuted—the members of his own family—Nussir-u-deen fell a victim to their vengeance. He was poisoned in his own palace, and one of his much-abused uncles succeeded him on the throne.

By all accounts, matters do not seem to be in a much better state in Oude than they were during the reign of Nussir. The present sovereign has not, perhaps, sunk so low in depravity as that very disreputable monarch, but the condition of the country is deplorable. Street-fights of the most sanguinary kind seem to be regarded as only episodes in the daily life of the citizens of Lucknow; armed resistance is frequently offered to the extortion of the revenue-collector; and, to crown all, we learn from the Indian newspapers that a religious war has broken out between the Hindoos and the Mohammedans. It appears, that some months ago a dissolute fellow, who had recently adopted the faith of Islam, inflamed the Mohammedans throughout the country, by accusing the Hindoos of having destroyed or defiled a holy place. He succeeded in collecting a large force, with which he marched upon the sacred shrines of the

Hindoos—the Hunooman Ghuree. The priests and their adherents made a desperate resistance, and the Mussulman fanatic and his followers were put to flight. The quarrel has not been healed, however; and such is the state of things, that the British resident refuses to allow the troops at his command to be withdrawn. It is obvious that Oude must be reformed by some other agency than that of its native princes.

THE CRÈMERIES OF PARIS.

'WHAT are the crèmèries of Paris?'

'The laiteries.'

'And what are the laiteries?'

'The crèmèries.'

The one is a richer word than the other, and may be more genteel for aught I know, but they both mean the same thing. They are places where visitors who know Paris breakfast more comfortably and more elegantly than at the hotels, cafés, or restaurants, and go to the theatre in the evening on the saving of money they have made. Unmentioned in *Murray*, and unnoted in *Bradshaw*, they are yet among the most pleasant features of the great and gay city, and are thickly scattered in every part of it, open from seven in the morning till nine in the evening. When I was last in Paris, as I went each day to the post—the *Grande Poste aux Lettres*, in the Rue Jean Jacques Rousseau—I had not to go twenty steps before I came upon one of these establishments, situated on the right *pavé* of the Rue Neuve des Petits Champs. See, no flaunting café front is here, no restaurant bedizened with gold, and scarlet, and blue. No crowds of epicurean gazers are here seen gloating on a *carte du jour*, such as is daily placed, in manuscript, in the window of a great restaurateur. No; here is at once an emblem of purity, simplicity, and modesty—a window-frame painted white, with delicate muslin-curtains within; and above, the title of *Crèmèrie*, in plain black letters.

We enter, and find a room, small, but clean and neat, with the walls papered to represent oak-framing and deal-panels; while on the side opposite the entrance, and, therefore, conspicuous to all comers, there is seen the legend, the terror of evildoers: '*On ne fume pas ici*.' In some crèmèries, lamentable to say, an ominous want of moral courage is manifested, and crime is dallied with under a trembling inscription of merely '*prudence de ne pas fumer avant midi*;' but in this one they go to the root of the evil at once, and '*On ne fume pas ici*' assures one of a salubrious atmosphere, antique simplicity, and Arcadian innocence.

So you advance to one of the little tables of gray marble, and having suspended your hat duly on a wall-peg—an untutored *Anglais*, and none but he, is so deficient in respect to the place as to deposit his hat on the table—up there comes a little maiden—a little maiden with quick-glancing black-beaded eyes, and jet-black hair, neatly braided, and a dainty little white collar, turned over the black body of her tartan dress. In a moment she has come up, and put her fingers, just the tips of her tiny fingers, on the edge of the gray marble table, to shew her readiness to take your orders. There, she has come up, and is ready, if you should speak, to look at you instantly with her clever, cheerful countenance. But now she gazes in another direction, and assumes an appearance of being quite abstracted from the world in some pleasant reverie; for she knows so well—the experienced little thing—that however unreasonable any number of customers are in expecting to be served instantly, and all at once, the moment they sit down, yet, when it comes to the all-important personal question of any one of them saying exactly what it is he does want, there is then a lamentable vacillation of such person's ideas, fancies, and notions.

And there is really much choice in the *crémeries*. Shall it be, for instance, *café au lait*, or *un chocolat à la crème*, or perhaps *un thé complet*—this last containing the various English paraphernalia of the tea-table, with the distinction of a white earthenware tea-pot, with a stray leaf-catcher hanging to the spout. Whole regiments of these you may have a glimpse of, through an open door, on the shelves of an interior room, where you may also from time to time see the papa and mamma of the little maiden as they bustle about with their assistants, and occasionally come forth, for a moment, to make sure that things are all square and correct in the salon.

But what shall it be? Say, *Café au lait*, and within twenty seconds after you have pronounced the words, the fairy-like movements of the little maiden, quickened into sudden life and motion at the very first word, have placed before you, with a 'Voilà, monsieur,' not a cup merely, large or small, but *un bol*—a regular jorum of hot steaming fragrant coffee, such as is never to be seen in England from one end of the land to the other. And by the side of this she places the little plate, with four great flat rectangular lumps of beet-root sugar, so cut by the patent machine, and so placed separately, that if you do not take them in the coffee, you may with greater ease, like every conscientious Frenchman, carry them away in your pocket. And with 'Voilà, monsieur,' again, she places before you a large basket of variously shaped rolls, all of the proverbial excellence and lightness of the Parisian manufacture.

She is everywhere, this little maiden, and does everything as quickly as she does it deftly and cheerfully. And when you take your leave, lo! in a moment, and without any bustle, there she is in the little bureau near the door, with such a bright morning smile about her eyes, receiving the payment, and checking some sort of private account, and seeming to think it all the most charming of holiday occupations.

'Bah!' exclaims some very refined reader; 'what do I care for a neighbourhood so unfashionable as the region of the Rue Neuve des Petits Champs, and the Rue Jean Jacques Rousseau, though the Grande Poste aux Lettres may be therein, and decorated though it be at every door with truculent-looking *Chasseurs de Vincennes*? I do not go there for my letters even now,' adds this gentleman; 'but they used to be all addressed to me at the office of the British Section of the Exposition, hanging out at No. 14 Rue du Cirque, where I called daily on my way to the Palais de l'Exposition, and saw those fine young officials of Marlborough House sitting in gilded rooms, and very busy cultivating moustaches and imperials à la Française.'

Nay, O gentle reader; but even there, in that fashionable locality, thou shalt be fitted with one of the *crémeries*, and thou shalt no longer have any excuse for wasting thy means on expensive breakfasts and riotous living. Behold the *Crémérie de la Madeleine* at the corner of the Rue Royale and the Rue Faubourg St Honoré!

Mark, again, the neat and clean appearance of the zinc-white window; then enter, and find again the same modesty in the appointments of the salon, and the same purity of atmosphere as before; for lo! there is once more that legend, worthy its letters of gold: '*On ne fume pas ici*;' which tells at once of quietness, and decorum, and salubrity; and it allows the gentle and the delicate, as well as the strong, to enter there.

And what a congregation of all classes at the little gray marble tables, the time being eight A.M. See! there is an officer of Zouaves, and two of National Guards; and a sergeant of the line, and three *ouvriers* in their blouses, a historical painter, and a portly citizen of grave and venerable deportment. There also are two young ladies, who must be governesses, and three others who

are pretty certainly milliners' assistants; and there is a very grand lady, and her husband, and her two boys; and another very grand and fat old lady, all black silk, and frills, and ribbons, with a table all to herself; and there is a family of country-folk, comprising three generations, and children of various denominations. There, too, is a very retiring widow, with three dear little girls; and there are two *dames des halles*. And they all behave with such propriety and politeness, and true gentility, that you are at a loss as to which of them to award the palm.

The service of this establishment is performed by four young maids; and how quickly and deftly they get through it! No one has to wait for whatever he or she may desire. *Enfs sur le plat*, or *riz au lait*, or *café noir*, each and all are by some magic placed before you the instant you ask for them, smoking hot, but never too hot.

And still the maids, gliding and glancing here, and there, and everywhere, may be seen occasionally, through a half-opened door in a further room, polishing up fresh *bols* and plates, and enjoying a sparkling conversation amongst themselves on their own affairs. I am rather afraid, though, that the damsel in the tartan of green and purple, and she of the maroon and brown and blue tartan, are rather hard on her of the brown dress, edged with curious garlanding of miniature twining leaves, with little violet and pink flowers between. But it is not on account of the dress they are poking their delicate fun at her; O no! there is some cause far more *spirituelle* than that; for she droops her long eyelashes bashfully, and goes on rubbing up the spoons with redoubled energy, answering not a word.

Of course, all this is confined to an undercurrent, not easy for a casual observer to catch even a glimpse of; and behind, as well as before the scenes, everything is exactly as it should be; for is not the whole establishment presided over by that most ladylike-looking madame, gazing with tender care on her guests from her marble-edged bureau! What distressingly delicate features she has, though; and a sad invalid must she be; but so admirable and so truly feminine must be her disposition, that in place of being soured, it has only been sweetened by the sufferings she has gone through. And is there not her husband frequently present also, that olive-complexioned Gaul, with coal-black hair, closely cropped on his head, but not at all cropped over and about and under his face and chin! Sometimes you see him very energetically assisting in the kitchen-department, and sometimes he comes and sits in his white shirt-sleeves and great black beard near his wife, enthroned on the bureau; and she is very proud of him.

But prouder still is she of her son, a delicate but intellectual-looking boy of about twelve years old, who comes home on Sundays from the Polytechnic School. Then, dressed in his uniform, he has the supreme happiness of sitting next his mother on the scarlet-cushioned seat of the bureau. There he occupies himself with reading and sketching, but sitting so uncomfortably on the extreme edge of the cushion. And why so? The cat has established itself in sleep just behind him, with its flanks rising and falling so high and so regularly, as to shew what a very sound sleep it must be enjoying, under the instinctive knowledge that the boy will not, for the world, and any number of *bonbons* besides, disturb the luxury of its position.

But now, having finished breakfast, you advance to the bureau, and recount to the good lady what you have partaken of; and she, adding up the charges as you mention each item, finally tells you, with a sweet smile, and with a half-sympathising half-hesitating sort of expression, as if grieved to the heart that you should be obliged to pay so much—she tells you, 'If it pleases monsieur, *neuf*.' Neuf! What, nine

francs! The *chocolat à la crème* was certainly very fine, and the *omelette* most glorious, and the rolls everything that Parisian bread is reported to be; and you have risen like a giant refreshed, and fit for walking through all the miles and miles of counters at the Palais de l'Industrie: but still nine francs!

Do not trouble yourself. 'Neuf' does not mean nine francs; for no matter how long the decimal coinage has been reported to be established by law in France, and however favourable the frequent *bouversements* of everything, during the last fifty years, must have been to the introduction of any new monetary system, the mass of the people will have nothing to do with the decimals and novelties of the government and the savans. 'Neuf,' therefore, means nine sous of the ancient régime, and is so much a matter of course, that there is thought to be no occasion for multiplying words by adding the denomination of the coin to the number.

Nine sous, therefore, or fourpence-halfpenny, you pay, and for a famous breakfast; and the good old lady receives the money so thankfully, and looks so deeply obliged to you, yet withal so fearful lest you should have hurt yourself by your liberality. And you go forth on your way in an eminently charitable frame of mind, and at peace with all the human race.

THE RADICAL MEMBER IN MECHANICAL EMPLOYMENT.

A MACHINE is a thing which fights with obstacles, and overcomes them. The name is taken from *mache*, the old Greek word for 'fight.' The machine or *mechane* of the Greeks was a cunningly devised apparatus, which hurled darts and stones into the hostile ranks of men, and battered down opposing walls and gates. After the lapse of some centuries, the *mechane* has not altogether lost the propensities of its early youth, for it still sometimes assumes the form of the Lancaster tube, and sends its masses of iron miles to shatter granite fortifications. This, however, is merely an accidental illustration of the tenacity of evil habits, which are proverbially so easy to acquire and so hard to shake off. Machinery was not designed by nature for these savage services; they were merely its wayward efforts in early and unregulated age. It was destined for a far nobler fate in terrestrial affairs. The conquests for which its powers were pre-ordained, are the destruction of the numerous material obstacles that stand in the way of the social and spiritual progress of the race of man.

Even the Greeks of olden time had one form of machine which they devoted to gentler purpose than the deadly ballista and catapult. This piece of apparatus had no complicated physiognomy, compounded of vacillating levers and slippery springs. It was simplicity itself in its outward guise; it looked like nothing more formidable than a long slender thread, tightly stretched between two somewhat distant pins; and its sole business was to make soft music when touched by gentle fingers. The Greeks called this music-creating machine *chorde*, and, by multiplying its presence, they formed rows of it into lutes and harps. We moderns retain its harmonious services in the same pleasant relations, and even extend and vary them in diverse ways, and with us the musical engine is still a *cord*, or string.

A cord is a very simple matter in regard to its general aspect and its absolute nature; but it is nevertheless a very important object when viewed in

its mechanical applications. It may be described as a lengthened strip of tenacious flexible substance, that is capable, at one and the same time, of holding together in its own fibres when strongly pulled from opposite directions, and of yielding or bending when it is pressed in a direction that crosses its length, so that it can be coiled about and led over obstacles and round corners. The music-making capacities of a string depend upon its strength and flexibility. When it is tightly stretched between two fixed points, drawn or struck aside from the position of rest in a straight line, and then allowed to resume it, it rushes back in such haste that it overshoots the mark, and then in its eagerness trembles backwards and forwards, in smaller and smaller vibrations, before it is once again still. But all the while it is doing this, it disturbs the surrounding air, and makes it to tremble, so that its tremblings float to the ear as sound. If a string be not flexible, it cannot be drawn out of its position of rest by the finger to be started in its vibratory proceedings; and if it be not strong, it will be broken at once by the disturbance, instead of being merely roused to elastic and tenile reaction.

Strength or tenacity are the prime and essential characteristics of a cord, contemplated in a mechanical as well as in a musical sense. A cord holds and bends, and these properties are turned to account in practical mechanics in two ways. In the first place, moving forces are communicated to bodies that are distant from the position in which they are originated. This is done when the fisherman by a rope drags up his net from the depths of the sea, into which he could by no means otherwise carry the activity of his arms. Here it is the tenacity of the rope that becomes available. Its fibres hold together so firmly, that when the upper end is drawn into the fisherman's boat, the lower end, with the net attached thereto, is of necessity constrained to follow. And, in the second place, moving forces are made to operate along lines of direction that are different from those in which they act at first. This is seen when the mariner *hoists* his sails to the top of the mast far above his head, by pulling ropes *downwards*. Here the flexibility of the ropes also comes into play. To produce the desired effect, they are bent over pulleys fixed above, and the drawing-force then operates along them, whatever may be the courses in which they run. To be able to apprehend what wonderful work this combination of fibrous tenacity and flexibility may be made to accomplish by human ingenuity, it is only necessary to glance for an instant at some skillfully managed vessel getting under-way, and to observe her white sails rise and expand before the magical persuasion of the delicate tracery of cordage, that stretches, like the web of some spider of aquatic habits, against the sky, in what seems hopeless and inextricable complexity.

The useful cord has a mechanical cousin, that is very frequently associated with it in work, but that belongs, nevertheless, to a higher order of potentates, inasmuch as it possesses the power to transmute as well as to transmit. A rope can do nothing but convey the pull that is made upon one of its ends along the sinuous course of its fibres to its opposite extremity, and to any distinct object thereto attached. But its cousin, now to be introduced to the reader, can either concentrate or diffuse, as well as transmit; it is able either to change gentle speed into slow force, or, on the other hand, to convert slow force into gentle speed. A strong man easily lifts 15 pounds three feet from the ground; he does this by the prolonged and continuous exertion of the strength of his arms: at each successive instant he has to raise the weight more and more. He accomplishes every fresh inch of the lift by an expenditure of precisely the same amount of effort. The sum of the whole number of efforts that he

makes is, therefore, expressed by saying that he has lifted 15 pounds' weight 36 times one inch. The force employed is 36 times more than that which would be sufficient to raise 15 pounds one inch. But it follows from this, that it ought to be able to lift 36 times 15 pounds—that is, nearly a quarter of a ton—one inch, if it were properly addressed to the task. That it is capable of doing this, when appropriately directed, is seen when the mason prizes up a block of stone that weighs a quarter of a ton by inserting the slightly curved end of an iron bar beneath its edge, and then forcing down the opposite extremity through a long sweep by the pressure of his hands and arms. If he presses against the upper end of his bar with a force equal to the direct movement of a weight of 15 pounds over 36 successive inches, or 3 feet, he is able by this to lift the quarter of a ton one inch. He concentrates the whole force of his long movement into a short lift, and so makes it more powerful in proportion; and he changes comparatively gentle speed into comparatively slow force, because his hand has to travel through the 36 inches in the same interval of time that the stone is travelling through one inch. The heavy weight moves thirty-six times more slowly than his hand. By the intervention of the iron bar thus employed, the mason, consequently, is able to lift from the ground a much heavier weight than he would otherwise be able to move; hence the contrivance by which he effects his purpose is called, in mechanical language, a *lever* (the word is taken from the Latin *levo*, to lift). The lever, like its relative the cord, changes the direction in which a moving force takes effect. It causes a downward pull to carry a heavy weight up, but it has not the flexible adaptability of the cord. It cannot convey a pull along a winding path and round corners; it has a very obstinate and downright character of its own: it will only work in lines that, one way or the other, are concentric with those along which the impelling movements are first made. Its stubbornness and obstinacy are, however, turned to excellent account, as, but for them, it would be destitute of the transmuting and concentrating capacities alluded to above.

It has been hinted, however, that the lever has two sides to its character: it not only concentrates the force of a long movement into a short and powerful effort, but it also, under a reversal of circumstances, enables a short slow effort to produce a rapid and comparatively extensive movement of diminished force. The pressure of a block of stone of a quarter of a ton-weight, upon the toe of a crow-bar, is able to raise quickly a weight of 15 pounds attached to the opposite end, through a long sweep of three feet or more. When the lever is employed in this way, in producing rapid movements out of comparatively concentrated effort, it does not much matter whether the force is applied quite at the opposite end of the bar to the extremity where the great movement is effected, or whether it is exerted a little nearer to that extremity than the further end. The arrangement is of the former kind in the instance alluded to above, where the block of stone presses on the crow-bar; but of the latter kind in the treading apparatus of the turning-lathe, where the foot is strongly pressed on the treadle a little nearer to the wheel than the remote extremity of the lever, in order that the crank of the wheel may be made to whirl with great rapidity through its wide sweep. The only important difference in the two cases is, that in the one the force is applied in a direction opposite to that in which the movement is effected (the stone goes down, and the long end of the lever is made to jump up); and, in the other, the force is exerted in the same direction as the movement (the crank of the wheel goes round the same way that the foot presses). By the appropriate employment of the lever, then, either an extended movement may be made

to produce a powerful mechanical effect, or a strong mechanical effort may be caused to produce a quick and extensive movement.

Cords and levers, working in concert, do many wonderful things in this world, but nothing more wonderful than that which they are constantly effecting in every animal frame that moves. The animal body is, indeed, the great triumph of mechanical power. In the 'human frame divine,' there are nearly 600 distinct cords pulling all sorts of movable parts, all sorts of ways. Sometimes they are arranged as rings round channels and cavities, which they open and close; at others, they are attached to broad membranes, lids, or pieces of gristle; and at others, they work true genuine levers, getting extensive movements out of short concentrated efforts. The machinery of a single healthy human frame is so powerful, that if all its strength were applied to the task, it would be equal in a single day to the effort of lifting 24,000,000 pounds one foot high! Yet the nearly 600 cords, with their auxiliary levers and apparatus, are all so accurately adjusted and arranged, that the creature who is served by their activity knows nothing whatever of their existence within his own skin, even when in most energetic operation, until he is told concerning them. There is no jar, no noise, no confusion in their operations. How different this from the case of human machinery! The tremor, and whirl, and confusion which greet the senses of the visitor who enters some factory or mill where the steam-giant is driving his thousand slaves, all tell a tale of imperfection. They come out of the fact, that the engineer who planned and executed the works, notwithstanding the possession of considerable skill, was master neither of the materials he used, nor of the principles he applied. The great engineer of nature, on the other hand, has perfect mastery over his materials, and a thorough command of principles; in this mechanical apparatus all goes smoothly and easily: there neither friction, nor sensible sign of laborious effort, seems to have a place.

It is in the limbs of animals that levers are principally employed as agents of movement. The body is borne along upon jointed pedestals or columns, which are at once the supports and the carriers of its weight. In the case of man, two limbs are made sufficient for the service of transport, in order that the arms may be hung from the shoulders ready to carry the hands about to the various objects that are to be grasped. Each limb is formed of a hard nucleus of distinct bones smoothly hinged together by joints. These bones are long rigid bars, which cannot be bent, and which so far resemble the rigid bar the mason employs in prizing up his heavy stones; they are, in fact, levers that are to be worked by the animal cordage. The cords are so extended from one bone to the other, that when they are pulled these separate pieces are caused to play on their joints, as a door does on its hinge. When a man walks, cords that are brought down from the trunk of his body to the bones of one leg are tightened all round, so that the weight of the body is first entirely balanced upon that column. Then the front cords of the other unoccupied leg are shortened, so that its foot is brought in advance. At the same time, the front cords of the first fixed leg are pulled, and the weight of the body drawn forwards, so that it can be easily lifted upon the advanced support. This is repeated alternately with the opposite legs. The trunk of the body is successively shifted onwards to pedestals placed in advance for its reception, but two pedestals are rendered sufficient for an extended movement, in consequence of their being carried along with the body, and used alternately, now as the support, and now as the column in advance. Both the forward movement of the body, and the advance of the disengaged column, are effected by the application

of the powers of the lever and cord, which have been explained above.

But if animal bodies are moved by the agency of cords operating upon levers, whence do those cords derive the impulses they transmit to the levers? It has been seen that, in a general way, cords only transmit moving force that is applied to one end, along their tenacious fibres, to the opposite extremity. Where, then, do the animal cords get the pull they communicate? The answer to this question is a statement of the crowning wonder: They get it out of their own substance; they are living cords, and contract, in virtue of their own natures, when circumstances require that they should do so. They are able so to shorten their own lengths, as to bring their opposite ends, and any bodies attached thereto, nearer together. This mystery, however, is so full of interest, that it must be looked more closely into from another point of view.

For the sake of familiar illustration, the reader must allow a draught to be made upon his imagination, and must fancy that he has before him a pile of drums heaped one upon the other, and that these drums are fastened together by their heads. There are ten of them, and each one is 3 feet high, and 2 feet across; so they form, altogether, a wooden and parchment column 30 feet high, and with a diameter of 2 feet. Imagination has turned architect, and built up a pillar of these dimensions, in which drums are the materials employed instead of blocks of granite or marble. But, now, let this kind imagination confer a yet further service; let it conceive that, all at once, through the exertion of some magical power, each one of the drums is made to alter its shape; so that, in place of being 3 feet high, and 2 feet wide, it becomes 2 feet high, and 3 feet wide. As the heads of the drums are all fastened together, the result of this will be, that the pillar will be shortened from the height of 30 to that of 20 feet. In other words, its two ends will be brought 10 feet closer together than they were before. Consequently, if either of these ends were attached to a movable object, the side of a lever-like bar capable of bending on a hinge-joint, for instance—the other end being fixed—the movable object would be forced to go with the end of the pillar to which it was attached; the lever would be bent upon its hinge. This imaginary case is really a counterpart of what happens when the levers of the animal body are worked by their living cordage. Each separate strand of the cord is built up of hollow drums, that are attached firmly together, and that possess the singular power of altering their dimensions and forms under special circumstances, by diminishing or augmenting their entire lengths, and so making their ends approach towards or recede from each other. The hollow drums are, however, not altogether strangers; they are old acquaintances presenting themselves under a new aspect. They are, indeed, all of them, 'radical members' of the body animate,* dressed and equipped for a special service. They are little 'living vesicles' turned mechanical, and modified in their intrinsic natures to fit them for the work they have to do. These vesicles, like most others of their congeners, are very diminutive bodies, notwithstanding the important operations they carry on. Until the last half-dozen years, they have altogether eluded human observation; and even now their presence is only detected by the scrutiny of the most powerful microscopes. As many as 14,000 of them can be laid side by side within the extent of an inch, and when in perfect repose they are half as long again as they are wide; but when in action these dimensions are changed, and they draw in their lengths, and swell out their sides, until they become as wide as they are long.

* See No. 30 of the Journal, page 72.

The diminutive cells or vesicles, of which the living cordage of animal bodies is composed, are made of delicate films of soft membrane; and they contain in their interiors a rich red liquid, which has been found to be nearly identical with that which is formed inside the coloured blood-corpuscles.* The contents of the red blood-corpuscle seem, indeed, to be the appointed food prepared for the support of these contractile little vesicles. It is the plastic nutriment destined for their use, and is conveyed to them in continued streams through the channels of the circulation. These vesicles are not spherical in shape: they are short cylinders, as described above, and are connected together in rows by their flat ends. But the great peculiarity which marks them out from all other kinds of vesicular existence, more even than their drum-shapes, is their singularly irritable nature. If they are touched by the point of a fine needle, while placed in the field of a powerful microscope, they are seen to alter their forms in the manner already described, and so to shorten the entire row viewed as a whole. In this way, in fact, the living cordage of the animal body is contemplated, working as it does in the hidden recesses of the mechanism, when engaged in its interesting task.

The contractile vesicles of animal cordage are laid in rows and cemented together, so that when they contract individually, the entire row may be shortened by the sum of their contractions. Each row of connected vesicles is termed, in the language of the anatomists, a *fibril*, which signifies merely a little thread; and a little thread it is, indeed, that is thus composed; hundreds of such threads would lie within the bulk of a hair. Alone, such a delicate agent could possess very trifling power; it could not bend and work massive levers, neither could it lift heavy weights. Thousands and millions of such agents can, however, accomplish all this. These fibrils are not themselves the strands of the living cord; between one and two thousand of them are laid side by side, to constitute each elementary strand. These are bound up together in a common covering, and so form a sort of bundle, which is termed a *fibre*, or string. These fibres can be readily seen by magnifying-glasses of very low power—about 400 of them can lie side by side within the extent of an inch. These fibres are again bound up by distinct coverings into separate packets, which are called *fasciculi*. Many of these fasciculi are again associated together, to form a yet more compound bundle, which is the cord destined for some one particular service. Each living cord is thus a bundle of fasciculi, which are all bundles of fibres, which are in their turn bundles of fibrils, which are rows of vesicles. The cord in itself bears the denomination of a *muscle*. The muscles of animals, therefore, are the contractile cordage by which the levers of their bodies are worked. The flesh of animals is made up of conjoined muscular bundles—all that has been described may be seen in it by appropriate management. The bones of the limbs are clothed with flesh; that is to say, the rigid shafts of the levers are incased in layer after layer of the living cordage that is designed to bring their powers into active play. As a human body contains in itself nearly 600 distinct muscles, destined for the accomplishment of different offices, who shall undertake to say what the numbers are of the subordinate elements that are comprised within the entire apparatus? It would be a very difficult task to put down the sum of the fibres, to say nothing of their fibrils. But what arithmetic could count the myriads of millions of contractile vesicles that enter into the composition of the muscles of a single living body!

Wherever animal movements are to be effected, muscular cords are laid down with their ends attached to the parts that are to be made to approach or recede;

* See *Radical Member on Commissariat Service*, No. 67.

then these cords are irritated until their vesicles contract, and so the movements are accomplished. The attachment of the muscles to the rigid parts that are to be moved, is made by splicing them together by incontractile fibres: these form what are called *tendons*. Fifty-six distinct muscles work the twenty-nine levers of which the leg and foot are composed, and fifty-three work the thirty levers of the arm and hand.

The contractile vesicles of the animal cordage perform their work, however, at the expense of self-destruction. Every change in their forms is effected through the instrumentality of a decomposition of a part of their own substance; a hand cannot be raised to the head without a portion of its own flesh being wasted in the effort. The agent of this waste is a certain subtle corrosive influence that floats in the atmosphere—the same, in fact, that rusts iron and consumes the fuel of fire. The muscles of animals, when in vigorous action, are consumed, indeed, in the same sense that burning coals are consumed. The corrosive influence enters the lungs with the breath, gets thence into the blood, is carried along its coursing streams to the muscles, and is thus always at hand to set up destructive change whenever contractile effort is required. But the blood also carries something else, besides destruction, to the muscles: it furnishes them with repair, as well as the agent of waste. Its myriads of little corpuscles convey stores of the rich red plastic material that is the food of muscular flesh. The muscles are repaired as fast as they are worn. Blood-vessels are sent, like pipes, to all the muscles, and these branch out, in the midst of their fleshy substance, into smaller and smaller ramifications, until at length they become finer than the smallest hairs, and are meshed about in this state all over the coverings of the fibres, like a most beautiful net-work. These fine blood-vessels do not open out anywhere into the fibres; but their walls, as well as the coverings of the fibres, and the films of the vesicles, are all so exquisitely delicate, that the several constituents which are essential to the operations of the muscle, and to its preservation in a fit state for work, transude freely through them. There are other channels, besides the blood-vessels, which come to the muscular fibres; these bring the peculiar irritating influence which causes them to combine their substance with the corrosive atmospheric ingredient, whenever contractile operations are to be carried on. The consideration of these, however, belongs to a different page of the Radical Member's history. When muscles are held in a state of rigid contraction—as when, for instance, a weight is sustained in the hand—all the several vesicles of which they are composed do not contract at once; if they did so, the muscular contraction could not be enduring—it would only be continued for an instant. The contraction spoils for the time the structure of the vesicles, and therefore exhausts them, and renders them unfit for the continuance of their work. On this account, some of the vesicles of each acting muscle are shortened, and others are lengthened, at the same moment, and these alternately relieve each other. Those which are elongated, are reposing and being refreshed and fed; whilst those that are shortened, are undergoing exhaustion. The acting part of the hand is sufficient to preserve the muscle in contraction at any one time. So long as a muscle is kept contracted, the shortenings and lengthenings of its little vesicles run like vibrations or waves backwards and forwards through its substance, and along its banded fibres and fibrils. This is a singularly beautiful contrivance for getting over a practical difficulty, and is worthy of the highest admiration. Such, then, is the way in which, by the mere alterations of the forms of a myriad of little vesicles, individually far too small to be visible without great magnifying, a result like the lifting of millions of pounds' weight one foot high, is able to be

attained. Such is, in rude outline, a sketch of the living machinery by which the movements of animals are effected; such is the fashion in which our old friend, the 'Radical Member of Society,' or, in other words, the elementary vesicle of organisation, demeans himself when put to mechanical employment.

THE SNOW-STORM.

A TALE FROM THE RUSSIAN OF FOUSHKINE.

ABOUT the year 1811—a period so memorable in the history of Russia—there lived on his domain of Nenaradof a rich proprietor named Gabrilovitch. He was noted for his kind disposition and hospitable habits. His house was at all times open to his friends and neighbours, who resorted there in the evenings—the elder ones, in order to enjoy a quiet game of cards with their host and his wife Petrovna; the younger, in the hope of gaining the good graces of Mari, a fair girl of seventeen, the only child and heiress of Gabrilovitch.

Mari used to read French romances, and, as the natural and necessary consequence, was deeply in love. The object of her affection was an almost penniless young ensign belonging to the neighbourhood, and then at home on leave, who returned her love with equal ardour. It is scarcely necessary to add, that the young lady's parents had strictly forbidden her to think of such an alliance; and whenever they met the lover, they received him with about that amount of friendliness which they would have bestowed on an ex-collector of taxes. Our young lovers, however, managed to keep up a correspondence, and used to meet in secret beneath the shadow of the pine-grove or the old chapel. On these occasions, they, of course, vowed eternal constancy, accused fate of unjust rigour, and formed various projects. At length they naturally came to the conclusion that, as the will of cruel parents opposed their marriage, they might very well accomplish it in secret. It was the young gentleman who first propounded this proposition, and it was most favourably received by the young lady.

The approach of winter put a stop to their interviews, but their correspondence went on with increased frequency and fervour. In each of his letters Vladimir Nicolovitch conjured his beloved to leave her home, and consent to a private marriage. 'We will disappear,' he said, 'for a short time; then, one day, we will go and throw ourselves at your parents' feet, who, touched by our heroic constancy, will exclaim: "Children, come to our arms!"' For a long time Mari hesitated. At length it was agreed, that on a certain day she should not appear at supper, but retire early to her room, on the pretext of a violent headache. Her waiting-maid was in the secret, and they were both to slip out through a back-door, near which they would find sledges waiting to convey them to the chapel of Jadrino, about five versts distant, where Vladimir and the priest would await them.

Having made her preparations, and written a long letter of excuse to her parents, Mari retired at an early hour to her room. During the day, she had complained of a headache, which certainly was more than a pretext, for nervous excitement had made her really ill. Her father and mother watched her tenderly, and constantly asked her: 'How do you feel now, Mari; are you still suffering?' Their fond solicitude went to the young girl's heart, and with the approach of evening her agitation increased. At dinner she ate nothing, and soon afterwards rose to take leave of her parents. They embraced her, and, according to their usual custom, gave her their blessing. Mari could scarcely refrain from sobbing. When she reached her chamber, she threw herself into an arm-chair, and

wept aloud. Her waiting-maid tried to console and cheer her, and at length succeeded.

There was a snow-storm that night: the wind howled outside the house, and shook the windows. The young girl, however, as soon as the household had retired to rest, wrapped herself up in thick muffings, and, followed by her maid carrying a valise, gained the outer door. They found a sledge, drawn by three horses, awaiting them; and having got into it, they started off at a rapid pace. We will leave them to pursue their journey, while we return to Vladimir.

All that day he had been actively employed. In the morning, he had visited the priest of Jadrino, in order to arrange with him about performing the ceremony; and then he set off to procure the necessary witnesses. The first acquaintance to whom he addressed himself was a half-pay officer, who willingly consented to what he wished. 'Such an adventure,' he said, 'reminded him pleasantly of the days of his youth.' He prevailed on Vladimir to remain with him, promising to procure for him the other two witnesses. Accordingly, there appeared at dinner the geometrical Schmidt, with his moustaches and spurs; and the son of Captain Ispravnik, a lad of seventeen, who had just entered the Uhlan corps. Both promised Vladimir to stand by him to the last; and the happy lover, having cordially embraced his three friends, returned to his dwelling, in order to complete his preparations. Having despatched a servant on whom he could rely with the sledge for Mari, he himself got into a one-horse aledge, and started for Jadrino. Scarcely had he set out, when the storm commenced with violence; and soon every trace of the road disappeared. The entire horizon was covered with a thick yellow cloud, whence fell masses rather than flakes of snow; and soon all distinction between land and sky was lost. In vain did Vladimir try to find his way. His horse went on at random, sometimes climbing over heaps of snow, sometimes falling into ravines. Every moment the sledge was in imminent danger of being upset; and, in addition, the pleasant conviction forced itself on Vladimir that he had lost his way. The wood of Jadrino was nowhere to be seen; and after two hours of this sort of work, the poor horse was ready to drop from fatigue.

At length a sort of dark line became visible in front; he urged his horse onwards, and found himself on the borders of a forest. 'Oh,' he exclaimed, 'I am all right now; I shall easily find my way to Jadrino.' He entered the forest, of which the branches were so thickly interlaced that the snow had not penetrated through them, and the road was easy to follow. The horse pricked up his ears, and went on readily, while Vladimir felt his spirits revive.

However, as they say in the fairy tales, he went on and on and on, and yet could not find Jadrino. His poor tired steed with the utmost difficulty dragged him to the other side of the forest; and by the time he arrived there, the storm had ceased, and the moon shone out. No appearance, however, of Jadrino: before him lay extended a large plain, towards the centre of which the poor traveller descried a cluster of four or five houses. He hastened towards the nearest, and descending from the sledge, knocked at the window. A small door in the shutter opened, and the white beard of an old man appeared.

'What do you want?'

'Is it far to Jadrino?'

'Jadrino! About ten versta.'

At this reply, Vladimir felt like a criminal condemned to execution.

'Can you,' said he, 'furnish me with horses to go there?'

'We have no horses.'

'Well, then, a guide: I will give him whatever he asks.'

'Wait, then,' said the old man; 'I'll send you my son.'

The window was carefully closed, and a considerable time elapsed. Vladimir, whose impatience became quite uncontrollable, knocked again loudly at the shutter.

The old man reappeared.

'What do you want?'

'Your son.'

'He's coming: he is dressing himself. Are you cold? Come in and warm yourself.'

'No, no; send out your son.'

At length a young lad, with a stout stick in his hand, made his appearance, and led the way across the snow-covered plain.

'What o'clock is it?' asked Vladimir.

'Day will soon break.'

The sun's rays, indeed, had begun to gild the east, and the village cocks were crowing when they arrived at Jadrino. The church door was closed. Vladimir, having paid and dismissed his guide, hastened towards the priest's dwelling. What was he about to hear?

Let us first inquire what was going on in the mansion of the master of Nenaradof. Just nothing at all. In the morning, the husband and wife got up as usual and went into the eating-room—Gabriel Gabrilovich in his woollen vest and his night-cap, and Petrowna in her dressing-gown.

Tea was served, and Gabriel sent a maid to inquire for Mari. The girl returned with a message that her young mistress had passed a restless night, but that she now felt better, and was coming down. In a few minutes Mari entered and embraced her parents.

'How do you feel, my poor little one?' asked her father.

'Better,' was the answer.

The day passed on as usual; but towards evening Mari became very ill and feverish. The family physician was summoned from the nearest town, and when he arrived he found his patient in a high fever. During fourteen days she continued on the brink of the grave.

Nothing was known of her nocturnal flight, as the waiting-maid, for her own sake, was prudently silent on the subject; nor did any of the other accomplices, even after having drunk wine, breathe a word on the subject, so much did all parties dread the wrath of Gabriel. Mari, however, during her delirium, raved so incessantly about Vladimir, that her mother could not doubt that her illness was caused by love. She and her husband consulted some of their friends on the subject; and, as the result of the conference, it was unanimously decided that Mari was destined to marry the ensign—that one cannot avoid one's fate—that riches do not insure happiness—and other fine maxims of the same kind.

The invalid recovered. Vladimir, during her illness, had never appeared at the house; and it was determined that his unexpected good-fortune should be announced to him—that he should be told he was now free to marry his beloved. What was the astonishment of the proud owners of Nenaradof, when they received in reply a letter from the young ensign, in which he declared that he would never enter their dwelling again, and prayed them to forget an unhappy being, for whom death was the only refuge!

A few days afterwards, they learned that Vladimir had rejoined the army. It was in 1812. No one ever mentioned his name to Mari, nor did she herself allude to him in any way. Two or three months elapsed, and one day she saw his name mentioned amongst the officers who had distinguished themselves at the battle of Borodino, and who were mortally wounded. She fainted, and had a relapse of fever, from which she slowly recovered.

Not long afterwards, her father died, leaving her

the reversion of his whole property. Wealth, however, brought her no consolation: she wept with her mother, and vowed never to leave her. They left their residence at Nenaradof, and took up their abode on another estate. Numerous suitors thronged around the rich and lovely heiress, but to none of them did she vouchsafe the smallest encouragement. Her mother often implored her to choose a husband; but she silently shook her head. Vladimir was no more: he expired at Moscow on the eve of the day the French entered that city. To Mari, his memory seemed sacred: she treasured up the books they had read together, his drawings, and the notes he had written to her—everything that could perpetuate her remembrance of the unhappy young man.

About that time a war, glorious for our country, ended. The triumphant regiments returned from the frontiers, and the people rushed in crowds to greet them. The officers who had set out as mere striplings, came back with stern martial countenances, their brave breasts covered with orders. Time of ineffaceable glory! How the heart of a Russian then bounded at the name of his country!

A colonel of hussars, named Vourmin, wearing in his button-hole the Cross of St George, and on his face an interesting paleness, came to spend a few months' leave of absence on his estate, which joined that where Mari was residing. The young girl received him with far more show of favour than she had hitherto bestowed on any of her visitors. They resembled each other in many particulars: both were handsome, pleasing, intellectual, silent, and reserved. There was a species of mystery in the demeanour of Vourmin, which piqued the curiosity and excited the interest of the heiress. He evidently admired her, paid her every possible attention—why did he never speak of love? He had acquired a habit of fixing his bright dark eyes on hers, half in reverie, and half with an expression that seemed to declare the approach of a decisive explanation. Already the neighbours spoke of the marriage as a decided business; and Petrowna rejoiced at the thought that her daughter would at length have a husband worthy of her.

One morning, when the good lady was seated in her drawing-room, Vourmin entered and inquired for Mari.

'She is in the garden,' replied Petrowna. 'You will find her there, if you wish to see her.'

The colonel went out hastily; and Petrowna, making the sign of the cross, murmured to herself: 'God be praised! I hope everything will be arranged to-day.'

Vourmin found his lady-love dressed in white, seated beneath a tree, close by a lake, with a book on her knee, like any heroine of romance. After the interchange of a few common-place sentences, Vourmin, with considerable agitation, told her that for a long time he had been desirous of opening his mind to her, and now prayed her to listen to him for a few moments. She closed her book, and cast down her eyes in token of assent.

'I love you!' exclaimed Vourmin—'I love you ardently!'

Mari bent down her head a little more.

'I have committed the imprudence of seeing you, of listening to you, every day.' (Mari recollected the first letter of St Preux.) 'Now it is too late to resist my destiny. The memory of your sweet face and gentle voice will form henceforward the joy and the torture of my existence; but I have a duty to fulfil towards you. I must reveal to you a strange secret, which places between us an insurmountable barrier.'

'That barrier,' murmured Mari, 'has always existed. I could never have become your wife.'

'I know,' replied Vourmin in a low voice, 'that you have loved; but death, and three years of mourning—Dearest Mari, do not take from me my last

consolation; do not deprive me of the happiness of thinking that you might have been mine, if not'—

'Hush!' cried Mari. 'Cease, I conjure you; you pierce me to the heart.'

'Yes, I have the consoling thought that you would have been mine. But I am the most unfortunate of men—I am married!'

Mari raised her eyes with a look of amazement.

'I am married,' resumed the colonel—'married these four years, and I neither know *who* my wife is, nor *where* she is, nor whether I shall ever meet her.'

'What can you mean? What is the mystery? But go on, I beg of you—I will tell you afterwards.'

'Here, then,' said the colonel, 'are the facts. In the year 1812, I was going to Wilna, to join my regiment. I arrived late one evening at a station, and had just given orders to have the horses immediately harnessed, when suddenly there arose a violent snow-storm. The master of the house and the postilion both strongly advised me to defer my journey; but, tempest or no tempest, I was resolved to push on. The postilion took it into his head that he could shorten the way by crossing a river whose banks he knew very well. However, he missed the right ford, and brought me to a place which was totally strange to him. The storm continued to rage, but at length we descried a distant light. I hastened towards it, and found myself outside a church, whence the light proceeded. The door was open. Sledges were waiting outside, and several persons were standing in the porch. One of them called to me: "This way! This way!" I got out of my sledge, and entered the church. One of the people in the porch said:

"In the name of Heaven, what has delayed you? The bride has fainted, and we were all on the point of returning home."

Half bewildered and half amused, I resolved to follow up the adventure. Indeed, I was allowed no time to deliberate, for my impatient friends hurried me into the interior of the church, which was faintly lit up by two or three torches. A girl was seated on a bench in the shadow, while another standing beside her was rubbing her temples.

"At length," said the latter; "God be praised that you are come! My mistress was near dying."

An old priest approached, and said: "Shall we begin?"

"Oh, begin by all means, my reverend father!" replied I giddily.

They assisted the young girl to rise: she seemed very pretty. Through a levity quite unpardonable, and, as it now seems to me, inconceivable, I advanced beside her to the altar. Her servant and the three men who were present were so much occupied about her, that they scarcely glanced at me; besides, the light, as I have said, was very dim, and my head was enveloped in the fur hood of my travelling-pelisse.

In a few moments we were married.

"Embrace each other," said one of the witnesses. My wife turned her pale face towards me. For an instant she gazed as if petrified, then, falling backwards, she exclaimed:

"It is not he! It is not he!"

Out of the church I rushed, before the astounded priest and the bridal-party had time to think of arresting my flight. I jumped into the sledge, and soon left all pursuit behind.'

'And,' said Mari, 'did you never ascertain what became of that poor woman?'

'Never. I do not know the name of the village where I was married, nor can I recollect that of the station where I last stopped. At that time, so little importance did I attach to my criminal levity, that when all danger of pursuit was over, I fell asleep in the sledge, and did not awake until I found myself at another station. The servant whom I had with me

was killed in battle, so that every clue seems lost by which I might discover the scene of that folly which I now expiate so dearly.'

Mari turned her pale face fully towards him, and seized his hands.

'What!' cried Vourmin: 'was it you?'

'Don't you recognise me?'

A long and close embrace was the reply.

JOURNEY FROM NEW ORLEANS TO CALIFORNIA.

IN FIVE CHAPTERS.—CHAP. IV.

SACRAMENTO city was pretty regularly built, mostly of wood. The houses were three stories high, and the streets unpaved. We say *were*, for the place has more than once since then been nearly destroyed by fire. It is melancholy to think that such depravity exists in human nature; but it is well known to those who have ever been there, that when the market has been glutted with wood, and speculators likely to be ruined thereby, fires, suspected to be incendiary, by reducing the town nearly to ashes, have been the means of renovating some tottering fortunes. At the time Mr Edwardson arrived in Sacramento, several large ships were lying at the quay laden with timber for San Francisco. His object being to get to the latter place as speedily as possible, he secured a passage in a vessel which was to sail next morning. The fare was 25 dollars, paid in advance, for which he was to have provisions, but must sleep on the deck. He had only a few dollars left, to procure some necessaries, and one meal was all he could obtain in Sacramento.

The distance from the 'city' to the mouth of the river Sacramento is 140 miles, which occupied the vessel five days, the woods on each bank being so thick and high, that there was no wind to fill the sails, and they floated down with the tide. A town, called Benicia, is situated on the estuary at the mouth of the river. In a situation precisely similar to Benicia, but on a much larger bay, into which the San Francisco river empties itself, is built the town of that name. The bay is open, and of great extent, surrounded with wooded hills, and small rising villages peeping among the trees. The harbour of San Francisco is entered through a very narrow channel, formed by a cliff on each side, on one of which is a now dismantled fortification commanding the entrance. In the middle of the harbour or inner bay is a small rocky island, called Goat Island, from the circumstance of some goats having been formerly let loose in it, and, having become wild, are now hunted by the inhabitants as pastime. The Bay of San Francisco was crowded with above 300 sail of vessels, which were unloading by the help of lighters about a quarter of a mile from the town. At the time we write of, there was but one wharf constructed of wood, extending some distance into the bay; but, from the shallowness of the water, only small-craft could make use of it for discharging cargoes. Being private property, however, it realised its owner a magnificent income.

A novel and ingenious structure attracted our young friend's attention in this every way remarkable place. Several large ships, which had been abandoned by the crews running off to the Diggings, and others condemned as not sea-worthy, were purchased by the merchants and forced into the mud as far towards the town as possible. A staging was then erected on the firm ground, conducting to a piazza, from which steps led to the upper deck. Here commodious counting-houses were constructed, while the holds became extensive warehouses.

Our young traveller's difficulties were all ended when he set foot in San Francisco, as he was provided with a letter of credit on a respectable house there.

After procuring the necessary addition to his finances to make his appearance reputable, his first inquiry was at the Post-office, where he found letters from home awaiting him, most grateful to his feelings. One of his brothers had preceded him to California; but as there had not been time to hear from him before he himself set out, he knew not where to seek him: his letters said, however, he was at or near San Francisco. The fact was, the elder brother had settled as a farmer at a little distance from the town. Having dressed, Tom strolled out on the Plaza. Wistfully he gazed into every face, hoping to see the one he sought, or some other who might not be unknown to him; but all were strange. He walked till the approach of twilight, and was about to return to the lodging he had engaged, when a hearty slap on the shoulder caused him to turn quickly round. The next moment, he was clasped in his brother's warm embrace, who received him as one from the dead—a report having reached the family that he had perished by the hands of Pawnee Indians on the prairie. The kind embrace, the quick question, and the glad reply, occurring as it did on the street of public business, attracted no attention: such things were of daily occurrence in San Francisco, where friends were constantly and unexpectedly meeting from the uttermost ends of the earth. The brother had come through Mexico, reaching the Pacific at San Diego, from whence he sailed for San Francisco.

Our young friend Edwardson, whom we accompanied in his toilsome journey over prairie and mountain, now found himself in San Francisco, enjoying all the comforts of a home, and many of the luxuries he had been accustomed to, with a keen sense of their value as we may readily believe, but he early began to feel that the fatigue and hardship he had undergone had told somewhat heavily on his constitution. The climate of San Francisco is decidedly unhealthy; we hear, indeed, comparatively little on this point, because hitherto the whole population of California has been emphatically a 'shifting' one, and that in more senses than one. Our present allusion is to the well-known fact, that very few of the migrating thousands who alight there do more than fold their wearied wings for a short rest; or, perchance, should they build a nest for a season, it is, on the following one, abandoned for another supposed more favourable location. Some, no doubt, do become acclimated, and while money is to be acquired will make it their home; others soon amass sufficient for moderate desires, and wisely return to enjoy it in fatherland ere their energies become too much weakened. Still, by far the greater number of sojourners in San Francisco belong to neither of these classes, but are merely birds of passage—here to-day, and disappearing to-morrow.

Hardly had Edwardson commenced business, with the most flattering prospects, and, indeed, immediate profits, when he was attacked with intermittent fever, of which many newly arrived Britons were at that time dying daily. It was a severe aggravation of this and other evils, that there were hardly any females among the inhabitants of San Francisco. If a youthful affectionate wife occasionally accompanied her husband, she could find no female assistants to relieve her from the most menial offices and the most harassing fatigues. The tender thoughtfulness, sleepless vigils, and soft sympathy of woman, were not to be had on any terms at the sick-beds in California. In these circumstances, if in no other, the *superior* sex must allow they are in most instances very inefficient substitutes; and such, Mr Edwardson avouches, is his dear-bought experience. Reluctant to resign his hopes without a struggle, he at length resolved to try a little change of air, and visit a married relative at Napa, a beautiful place about sixty miles from San Francisco.

The arrival of a large steamer from New York, intended to ply between Sacramento and San Francisco, gave him a convenient opportunity for his trip. This steamer, by the way, was the first and only one that in the voyage out attempted the formidable passage through the Straits of Magellan, instead of round Cape Horn. They had hoped thus to shorten their way, their fuel having run out; but their sufferings were dreadful. Many of the men who landed to cut wood for firing perished from the inclemency of the weather, and three of their number were massacred by the fierce natives.

After a pleasant passage in this commodious steamer, Edwardson landed at the town of Benicia, forty miles from San Francisco. It is situated on a fine bay of the same name, which forms part of the magnificent estuary into which the river Sacramento empties itself, and at the extreme entrance to which is San Francisco and its bay. Benicia is the rendezvous of the American Pacific fleet, and also a dépôt for naval stores. Commodore ap Catesby Jones was, at the moment of our traveller's arrival, exercising his little fleet in the bay. It consisted of a government steamer, a fine frigate, and some sloops-of-war. Twelve miles in the interior from Benicia is also a government station for troops, called Sonomi, where, according to the economical and yet efficient plan of the United States, 200 men are found sufficient to keep in check the Indians of the neighbourhood, and every other enemy, domestic or foreign; while the fleet, on a scale but little more magnificent, protects all the commerce of that extended coast. A romantic and beautiful creek, navigable only by small boats, flows through a fertile valley into the bay close by the town, of which stream and valley, called Napa, we shall have a little more to say presently.

Apart from its being a government station, the present importance of Benicia arises solely from its being the great abattoir for San Francisco, with its ever-shifting population and crowded shipping. Numerous herds of cattle range the hills and valleys round Benicia, apparently without owners, and yet they are for the most part the property of one individual, a Spanish Creole.

The animals are so wild, they must be caught by the lasso, and on being slaughtered, the carcasses are sent by steamer to San Francisco. Before the discovery of gold, tallow and hides were the wealth of California, the flesh of the animals being of no value, except for the tallow it might produce. But since the vast influx of consumers into the country, cattle-owners there, such as Don Nicolas, the Creole, are rapidly becoming millionaires. Every rancho, or farm, has now its herd of those wild cattle, which often do great damage to the fields and gardens, since hardly any form of enclosure can resist their encroachments. To Britons, whose pasture-farms are so circumscribed and enclosed, this may seem a strange state of things; but it must be remembered, that it is only a few years since the United States' government acquired California from Mexico, and when it was so acquired, the rights of the settlers already in possession of large tracts of country, consisting of wood and pasture, were not interfered with. The owners, then, of these wild herds, aware of their increasing value, became more careful and jealous of their rights, and immediately took the legal measures necessary to have their property, both in land and stock, distinctly defined, and duly registered. The deed-office, or depository of archives, where are kept all registers of municipal and personal rights, is at San José, the capital of California; a small town selected for its central situation as the seat of the local government. Some idea of the value of cattle-stock may be formed from the high price of provisions. At the time Mr Edwardson was in San Francisco, the lowest price for any respectable board

in a family was £5 a week. This evidently arose not from defective supply, for that, we have seen, was abundant, but from the plenty of money, interest on which was from 7 to 10 per cent. a month regularly! On the other hand, labour and clothing were still more expensive than food, because of the deficiency in the requisite supply.

Besides neat-cattle, the hills and woods round Benicia are tenanted by vast numbers of horses, in a similar condition of unfettered barbarism. Horses are very seldom exported, but no genuine Californian ever thinks of using his own legs in locomotion. He goes or sends to the nearest spot where any steeds bearing his mark are grazing; with the lasso—in the use of which every one here is so expert—he catches a horse; he makes a bridle of the end of his lasso, and leaping on the creature's back, careers away towards his destination, riding the animal till it can go no further, when he coolly exchanges it for the first he can lay his hands on; and in this way, on a journey of a few hundred miles, the rider will tire out two or three horses, and accomplish his mission in a space of time quite worthy of a Melton huntsman. When steeds are regularly kept for riding, they are of course more tenderly dealt with, and on a journey of business or pleasure they are magnificently caparisoned. Indeed, the Californian, like the Spaniard and Mexican, prides himself on having the most handsome and costly saddles and bridles. In California, they never ride the mares, believing that it injures the breed. Don Nicolas is said to be owner of 5000 horses and mares, besides cattle, of which he can keep no reckoning.

Having visited the commodore of the fleet, and one or two of the most respectable residents in Benicia, to whom he had letters, Edwardson took a six-oared boat, to proceed up the stream to the little town of Napa, where his relative resided. The voyage was most picturesque. Every three or four miles, the stream widened into a small bay, and then closed again into a thread-like brook; while the banks were covered with immense flocks of geese and other water-fowl. The country on either hand, called Napa Valley, is of fruitful alluvial soil, now becoming richly cultivated, and supplying the different towns from Sacramento to San Francisco with horticultural produce, including rare and beautiful flowers, of which the people seem very fond, as every dwelling is profusely adorned with them. How humanising and refreshing those lovely remembrancers of nature, amidst scenes where gold and gain seem uppermost in every mind! The produce of the Napa gardens is carried down in boats, to meet the steamer at Benicia. This romantic and singularly beautiful valley has one, and but one, serious drawback as to locality, which consists in the depredations of the wild cattle that pasture on its enclosing hills, which in a night sometimes destroy the labours and growth of months. During September and October, it rains almost incessantly; and, unfortunately for him, this was the very season of Edwardson's visit. The rest of the year, it is very dry and healthy. Nothing can be more beautiful, in its rural seclusion, than the little town of Napa, at the head of the creek, which extends to about twenty miles from Benicia. The site belonged to an enterprising American gentleman, who mapped out the ground, and sold it in lots, giving each alternate lot gratis. This is a common practice in the United States, to induce settlers to build regularly, in rows or streets, as there will be always found some one to fill up intermediate lots, on the favourable terms of 'no remuneration required' for the site. The town of Napa presented the appearance of a neat and increasing country town, in its earliest stage of existence, containing, at the time of which we write, only about 200 inhabitants. They were all of what may be called the better class, engaged in the cultivation of the fields

and gardens of the valley; and here was to be found some graceful female society, and servants which the families had brought with them from the older country. All seemed to be simple in their tastes, and moderate in their desires and expectations, as became a rural population. The only public building was a very small but elegant chapel for Protestant worshippers, though two or three Catholics did not refuse to bend the knee there to the common God and Parent of all. We can hardly conceive a more enviable and virtuous mode of life than was observable in this happy valley, though, doubtless, it would be pronounced unendurable by the restless spirits who keep the world in perpetual commotion.

After a week's pleasant stay at Napa—during which Edwardson found himself entering with zest into all his relative's enthusiasm about clean crops and favouring weather—the sky having continued to pour as from a beneficent watering-spout the fertilising rains on which so much depended, the friends were one evening invited to spend a few social hours in the house of the alcaid or chief magistrate, or governor of the place. The rain continued to pour in a rather depressing style, at least so thought the stranger. The twilight gloom was therefore shut out, the cheerful log-fire unsparingly built up, the well-appointed room amply lighted, and a game at whist proposed; the ladies looked on, and wagered with each other on the winners; the stakes being generally so many hours' work in their respective flower-gardens. While all the little party thus endeavoured to pass the outwardly gloomy evening in cheerfulness and good-humour, suddenly one of the gentlemen observed his feet were wet, and their host instantly jumped up, exclaiming that the river must have overflowed its banks, and inundated the house, which, with a few others, was situated rather low. The conjecture was soon found too true. In five minutes the water was above the ankles, and rapidly increasing. As such a circumstance had not before occurred, the panic was considerable, especially among the females. The houses being all built, as is usual in those latitudes, of one story, the resource of an upper floor did not present itself. The gentlemen then, each taking a lady in his arms, at once proceeded to make their way to the higher ground above the town. There was not, in reality, much danger, as the volume of water was not great, though the brooklets from the hills were sending down considerable streams; but the discomfort, of course, was pretty obvious and urgent; in fact, when they left the house, the water reached above the knee—above the chairs and couches on which the ladies had at first taken refuge from wet feet. It was not without considerable exertion, especially in Mr Edwardson's weak state of health, that he waded with his fair burden even to a short distance, where one of the other gentlemen returning, relieved him. Our hero, however, in the exuberance of his gallantry, insisted on going back to the house for the young lady's writing-desk, which she had left on a table in her dressing-room, and which she recollected contained some valuable ornaments and papers. When Edwardson found his way to the room described, the water reached his waist; but the desk was still safe, though many other articles, and amongst them sundry fairy-like slippers, were floating about in a bewildered fashion. Heedless of all else, Tom seized the prize he sought, and thought himself—at the time, at all events—amply rewarded for his pains by the gratitude and gladness of the young and interesting owner. No life was lost in the overflow, and not much damage to property. Next day, all was made dry and comfortable again, by the cutting of a deep drain to carry off the superabundant water; but Edwardson experienced a return of his disorder, and that in so aggravated a form, that it was thought necessary he should immediately

return to San Francisco for medical assistance. Leaving the sweet valley of Napa and its kind inhabitants with great regret, he again joined the steamer at Benicia, and arrived at his temporary home, considerably revived even by the short voyage on the beneficent sea.

A few weeks after his visit to Napa, and not above five months after his first arrival in San Francisco, his medical attendant assured him his life depended on a speedy departure to a more congenial clime. Other unexpected domestic circumstances made it desirable he should at once resolve to leave ambition, and the present chances of fortune, to the more reckless or more robust, and retrace his way to his native air and paternal home.

On the 2d of February, Mr Edwardson embarked in the steamer *Panama*, bound for the town of that name; a voyage from San Francisco of 3500 miles. A steamer sails once a fortnight on this route, touching at the intermediate ports on the Californian and Mexican coasts, which we shall shortly describe as we proceed.

Our traveller was so weak on the day of his embarkation, that he had to be carried on board the vessel, and he left the 'land of promise,' not without a sigh for past hopes melted into air, yet almost without a care or wish as to the future of his lot in life, so totally prostrated were the buoyant energies with which, not a year before, he had undertaken the toilsome route over the continent.

In twenty-four hours after leaving San Francisco, the steamer stopped at Monterey, where there is a government fort. He was assisted on deck to see the place, which looked very lonely, and imposing in its very solitude.

The next place at which our voyagers touched was San Diego, a considerable and fast increasing place. It is the outpost or last town on the south-west of that part of California ceded to the United States, though the boundary-line is about thirty miles still further south. San Diego is the point at which terminates one of the overland routes to California from the southern states. This course, though not so long, is still more arduous and dangerous than that by the Rocky Mountains, as Tom Edwardson's elder brother had proved. The climate is overpoweringly hot and unhealthy; the country is arid and barren; and the native Mexicans and barbarous Indians who infest the route are almost equally to be dreaded. In the immediate neighbourhood of San Diego, several encounters took place during the war between the Mexican troops and those of the United States under General Kearney. In only one of these skirmishes were the Mexicans successful, under a certain Don Pedro, whom Edwardson had frequently met with in San Francisco, indeed with whom he on one occasion exchanged a metal watch for a fine mule. The don was accustomed to talk magniloquently of 'his victory over General Kearney at San Diego.'

The steamer made a stay of only a few hours at this place, and Edwardson was still too much of an invalid to venture on shore; but he gazed from the deck with pleasure on the town, nestling in rich dark shade, the leaves of the overshadowing trees waving with freshness in the breeze, and the mild beams of an afternoon's sun gilding every object with brightness and beauty. San Diego is situated on the right side of a very fine bay, whose shores, in their picturesque outline and luxuriant woods—under a sky, too, as clear and mild—might rival even those of Naples. As yet, the town itself consists but of a collection of palm-huts, inhabited chiefly by Mexican Creoles. Amidst these, and the motley throngs arriving, ragged and exhausted, from the overland-journey, en route for San Francisco, little that is cleanly, moral, or pleasing need be sought or expected; but there is a better class of residents, who live upon their farms and villas in the immediate neighbourhood of the town and on the shores of the

bay; and nothing can be more lovely than the aspect of these dwellings, each nestling among banana-trees, or embosomed in the palm-groves.

RATE AT WHICH WAVES TRAVEL.

A paper was read by Professor Bache before the American Scientific Association, stating, that at nine o'clock on the morning of the 23d of December 1854, an earthquake occurred at Simoda, on the island of Nippon, Japan, and occasioned the wreck of the Russian frigate *Diana*, which was then in port. The harbour was first emptied of water, and then came in an enormous wave, which again receded and left the harbour dry. This occurred several times. The United States has self-acting tide-gauges at San Francisco and at San Diego, which record the rise of the tide upon cylinders, turned by clocks; and at San Francisco, 4800 miles from the scene of the earthquake, the first wave arrived twelve hours and sixteen minutes after it had receded from the harbour of Simoda. It had travelled across the broad bosom of the Pacific Ocean at the rate of six and a half miles a minute, and arrived safely on the shores of California, to astonish the scientific observers of the coast-surveying expedition. The first wave, or rising of the waters, at San Francisco, was seven-tenths of a foot in height, and lasted for about half an hour. It was followed by a series of seven other waves of less magnitude, at intervals of an hour each. At San Diego, similar phenomena were observed, although, on account of the greater distance from Simoda (400 miles greater than to San Francisco), the waves did not arrive so soon, and were not quite as high.—*Boston Atlas*.

THE INDIAN ARCHIPELAGO.

From dawn until dark we went slowly loitering past the lovely islands that gem those remote seas, until the last of them sunk astern in the flush of sunset. Nothing can be more beautiful than their cones of never-fading verdure, draped to the very edge of the waves, except where some retreating cove shews its beach of snow-white sands. On the larger ones are woody valleys, folded between the hills, and opening upon long slopes, overgrown with the coco-palm, the mango, and many a strange and beautiful tree of the tropics. The light lazy clouds, suffused with a crimson flush of heat, that floated slowly through the upper heavens, cast shifting shadows upon the masses of foliage, and deepened here and there the dark-purple hue of the sea. Retreating behind one another until they grew dim and soft as clouds on the horizon, and girdled by the most tranquil of oceans, these islands were real embodiments of the joyous fancy of Tennyson, in his dream of the Indies, in *Locksley Hall*. Here, although the trader comes, and the flags of the nations of far continents sometimes droop in the motionless air—here are still the heavy-blossomed bowers and the heavy-fruited trees, the summer isles of Eden in their purple spheres of sea. The breeze fell nearly to a calm at noonday, but our vessel still moved noiselessly southward, and island after island faded from green to violet, and from violet to the dim pale blue that finally blends with the air.—*Taylor's Visit to India, China, and Japan*.

THE RUSSIAN OFFICIAL.

If the chief officer of a district and the chief of police find a dead human body, they carry it for some weeks about the Watiake villages—thanks to the cold, which renders this possible. In every village, they say that they have just found the corpse, and that a trial will be held in that place. Then the Watiakes prefer giving a ransom. Some years before my arrival, it happened that a chief officer, who had made it his business to collect ransoms, brought a corpse into a large Russian village, and demanded about 200 rubles. The alderman assembled the parish: they would not give more than 100. The officer would not yield. The peasants then grew angry, shut him up together with his two secretaries in the Common Hall, and threatened to burn them therein. The officer would not believe in this menace. The peasants put straw around the house, and offered the officer, as an ultimatum,

a bank-note for 100 rubles, at the point of a stick, through the window. The heroic officer asked 100 more; and thereupon the peasants fired the house from all sides: the three Mutli Scaevolæ of the provincial police were burnt. This matter was eventually brought before the senate. The Watiake villages are in general much poorer than the Russian.—*Herzen's Exile in Siberia*.

ENGLISH WORSHIP IN SEBASTOPOLE.

SUNDAY, 14TH SEPTEMBER, 1855.*

LET the batteries cease shelling, the mortars lie still,
Be these cannon-mouths muzzled that snarl on the hill;
March our men down to prayer, down the pathway bomb-
frayed,

While our priests in the centre advance undismayed.

Where the shell entered yesterday now enter we,
Where the Russ worshipped yesterday now worship we,
Not with altars and tapers, and images stained,
But with gratitude bursting and love unrestrained.

Through the gaps in the Cupola issue our prayers,
O'er the grass-covered streets and the desolate squares,
Our praises confused in tumultuous hymn,
For the singer's voice choketh, the singer's eyes dim.

In Sebastopol's shelter we hug ourselves here;
Bar outside the winter, its famines and fear!
Bar outside the bastions blood-crust-ed which led
To the stronghold of Russia o'er Englishmen dead!

Heap, heap up the trenches for graves o'er their bones,
Tear the enemy's ramparts for monument stones,
Let them lie where they fell, in Posterity's sight,
Our brothers, our sons, given spendthrift in fight.

We gave them for England, they gave themselves free,
More lavish than sunbeams on tropical sea,
Generations to come shall record of each man,
'Twas a hero-heart cleft on the deadly Redan.'

Peal, peal out the organ, if yet one be found
Unripped by the grape-shot that cumber the ground;
Ring, ring out our psalms over harbour and shore,
For our dead are at peace with the God they adore!

* *Poems of Ten Years, 1846-1855.* By Mrs D. Ogilvy. London: Thomas Bosworth. 1856.

FIVE HUNDRED AND SEVENTY-THREE.

In Dr Strang's *Glasgow and its Clubs*, there is an anecdote of Dr Simson, the mathematician, who had the habit of counting his steps as he walked: 'One Saturday, while proceeding towards Anderston, counting his steps as he was wont, the professor was accosted by a person who, we may suppose, was unacquainted with his singular peculiarity. At this moment, the worthy geometrician knew that he was just *five hundred and seventy-three* paces from the college towards the snug parlour which was anon to prove the rallying-point of the *hen-broth* amateurs; and when arrested in his progress, kept repeating the mystic number, at stated intervals, as the only species of mnemonics then known. "I beg your pardon," said the personage, accosting the professor; "one word with you, if you please."—"Most happy—573!" was the response.—"Nay," rejoined the gentleman, "merely one question."—"Well," added the professor—"573!"—"You are really too polite," interrupted the stranger; "but from your known acquaintance with the late Dr B—, and for the purpose of deciding a bet, I have taken the liberty of inquiring whether I am right in saying that that individual left five hundred pounds to each of his nieces?"—"Precisely!" replied the professor—"573!"—"And there were only four nieces, were there not?" rejoined the querist.—"Exactly!" said the mathematician—"573!"

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